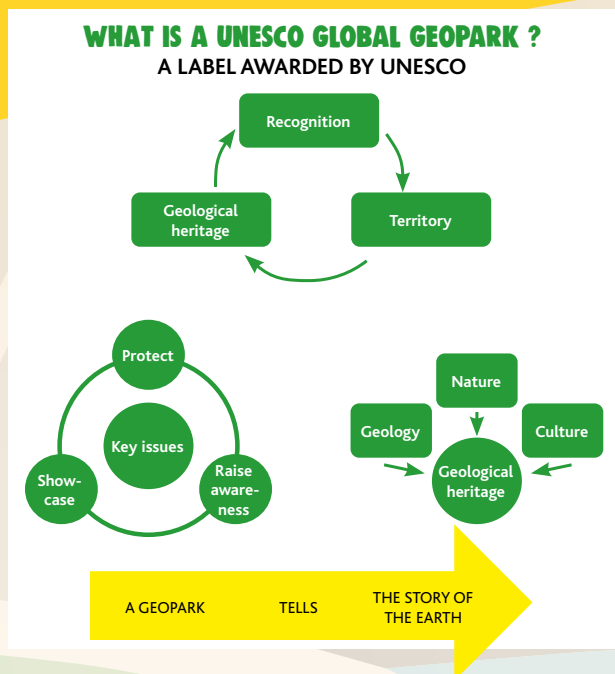


# GEOTRAIL

# TELLIN



# WHAT IS A GEOPARK ?



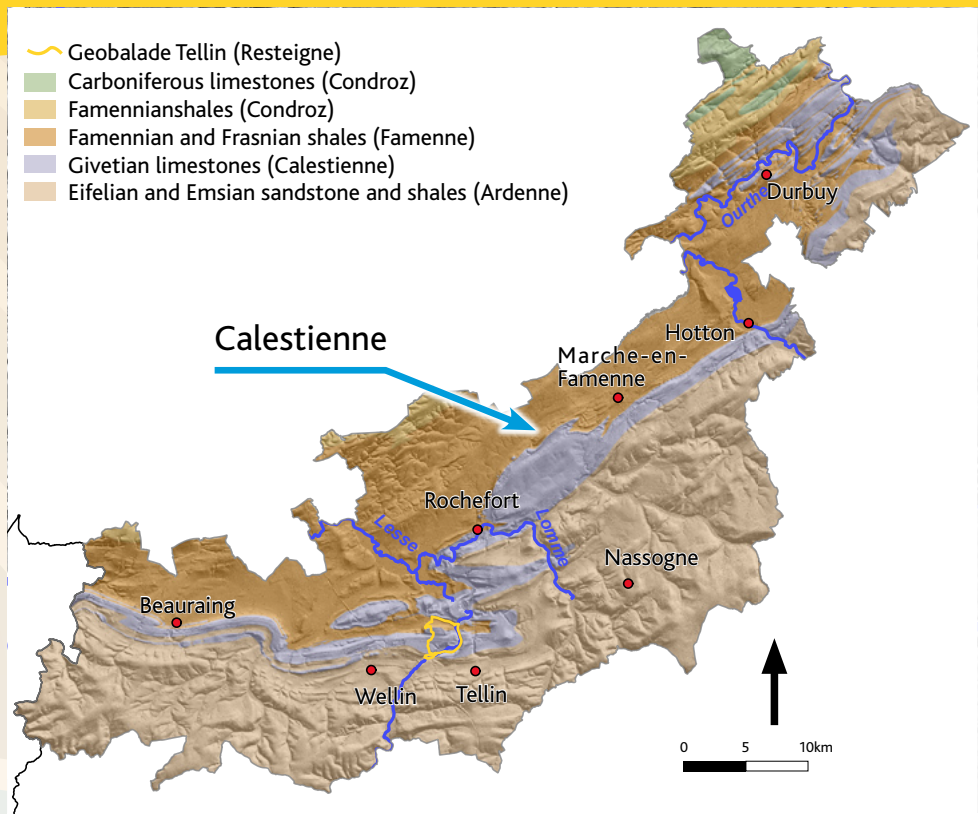
UNESCO Global Geopark is a label awarded by UNESCO to a single, unified geographical area where sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development. At the end of 2019, there were 147 Global Geoparks in 41 countries around the world.

## L'UNESCO GLOBAL GEOPARK FAMENNE-ARDENNE

The Geopark encompasses the municipalities of Beauraing, Wellin, Tellin, Rochefort, Nassogne, Marcheen-Famenne, Hotton and Durbuy, all sharing the distinction of being located on the Calestienne, a transitional strip of 910 km<sup>2</sup> separating the Famenne and the Ardennes, and home to a population of 67,250 inhabitants. The two outstanding geological features of the Geopark are its Calestienne limestones and their caves (karst systems) as they relate to the geological structure of the region.

### The Calestienne

The landscapes found within the Geopark frequently reflect what lies beneath the surface. Among these landscapes, one particular strip stands out: the Calestienne, the common thread of the entire Geopark. This strip, consisting mainly of Givetian limestones, runs from Chimay in the west to Remouchamps in the east. It is bounded to the south by the Ardennes and to the north by the Famenne depression. The term Calestienne may be derived from the German Kalkstein (limestone), or from a prefix referring



A simplified map of the Famenne-Ardenne UNESCO Global Geopark superimposed on a relief map (LIDAR image), highlighting the link between the geology and the geomorphology. Sandstones are more resistant than limestones, which in turn are more resistant than shales, resulting in the relief visible on the map: to the south rise the heights of the Ardennes, ending in a narrow depression scooped out of the Eifelian shales, the limestone strip of the Calestienne standing out in relief (in blue) and to the north the shales of the depression (in brown). (Data sources: "Wallonia Public Service" <http://geoportail.wallonie.be>).

either to limestone or to heat (plants that grow on limestone are more thermophilic than those that prefer shale soils) – and from the Walloon word Tienne, meaning a high place.

## Geological history

1. The geological history of the Geopark begins during the Devonian period (419 to 359 Ma) with the sedimentation of deposits of horizontal layers on the ocean beds.
2. These sediments will gradually become buried under their own accu-

System	Series	Stage	Age Ma
Devonian	Upper	Famennian	359
		Frasnian	372
	Middle	Givetian	383
		Eifelian	388
	Lower	Emsian	393
		Pragian	408
		Lochkovian	411
			419

En géologie, la chronologie se réfère souvent au tableau stratigraphique. Ici un extrait pour le système dévonien (qui fait partie de l'ère paléozoïque). Les étages portent les noms des lieux où ils sont décrits. Le Geopark se situe au cœur de ces lieux importants pour la géologie du Dévonien moyen et supérieur.

mulation and undergo a slow process of transformation into solid rock. The main rocks beneath the Geopark are thus sedimentary: shales, sandstones and limestones.

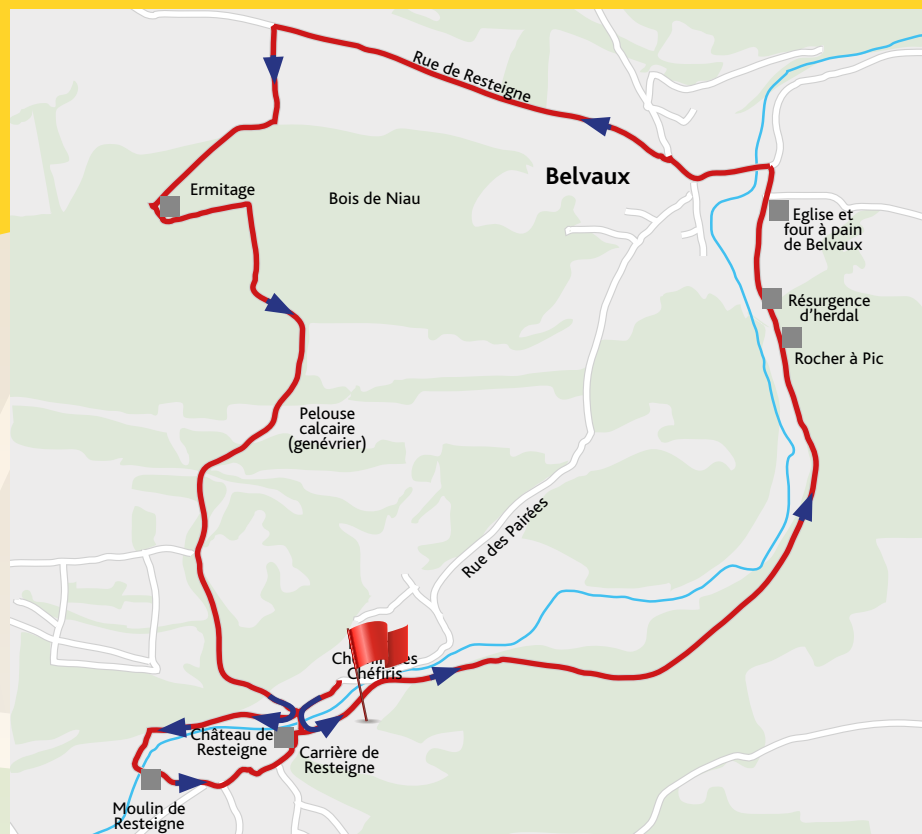
3. These rocks would later undergo severe deformation, some 320 Ma ago, during the formation of an ancient mountain chain (the Variscan orogeny), the remains of which form the Geopark. This event is what produced the many folds and faults now clearly visible in the landscape, such as the Durbuy anticline.

4. The mountain chain was soon eroded down to a vast flat surface known as a peneplain, which still constitutes the subhorizontal skyline visible throughout Upper Belgium. During the latter part of the Secondary era (Mesozoic) and the early part of the Tertiary (Cenozoic), a warm and humid climate profoundly altered the limestone rocks and formed ghost-rocks, the precursors to caves. In the second part of the Cenozoic, the Ardennes bedrock was uplifted, the river system became incised and caves formed.

## THE COUNTRYSIDE CODE :

- ▶ Respect nature, geological heritage, wildlife and plants; do not pick plants, flowers or fruit of any kind.
- ▶ Follow the highway code, which applies on country lanes just as much as on the rest of the road network, and obey any prohibitions or restrictions on traffic.
- ▶ Use the pavement wherever there is one, otherwise walk on the left-hand side of the road, facing oncoming traffic.
- ▶ Make sure you are visible to road-users at all times (wear light-coloured clothing).
- ▶ Opt for full-length trousers to ward off ticks.
- ▶ Stay on the paths by following and sticking to the permanent or temporary waymarking.
- ▶ Scrupulously respect private property: you must obtain the owner's permission before entering.
- ▶ When you meet other walkers, remain courteous at all times and be the first to offer a greeting.
- ▶ Keep noise to a minimum, to avoid causing nuisance to others.
- ▶ Do not startle or disturb grazing animals.
- ▶ Keep your dog on a lead and under control.
- ▶ Take all your litter home with you.
- ▶ Lighting fires is strictly prohibited.





**Start :** Parking chemin des Chefiris, 6927 Resteigne

**GPS (WGS84):** Latitude : N 50.0915°

Longitude : E 5.177°

**Distance/time :** 9 km – 2 hours 35 minutes

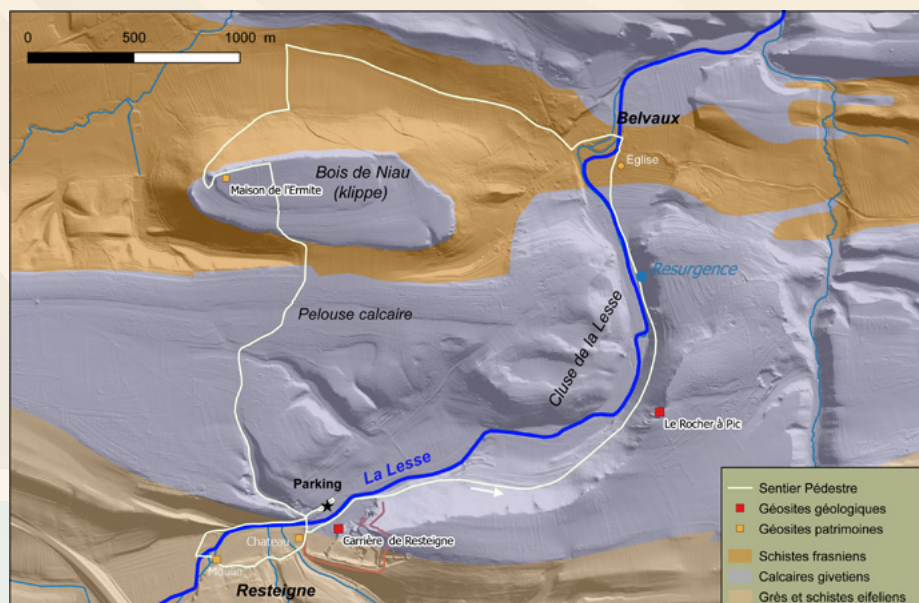
**Elevation change :** 250 m

**Level :** easy





This trail takes you on a magnificent route between the villages of Resteigne and Belvaux via the Lesse Valley and the Bois Niau, via an equal mix of footpaths and minor roads and with the occasional ascent such as the route up to l'Ermitage (100 metres). Geologically speaking, it highlights one of the characteristic features of our Geoparc, its Devonian limestones.



Représentation du parcours du sentier pédestre (trait blanc) sur une image mettant en évidence le relief et obtenue par procédé LIDAR. Les calcaires sont plus résistants que les schistes, ce qui donne le relief visible sur la carte LIDAR : calcaires en relief, les schistes en dépression. (Sources des données : « Service public de Wallonie » <http://geoportail.wallonie.be>).

The trail starts in the Chemin des Chefris car park, opposite the River Lesse. Leave your vehicle in the car park and head towards the brasserie, "Chez Din-din". At the fork in the road, turn left to cross the bridge over the River Lesse. On your right stands the Chateau of Resteigne.

The chateau is your first geosite on this Famenne-Ardenne Geopark trail. As it stands today, the privately-owned chateau is a rectangular construction, parts of which date from the 8th century. Standing on the bank of the Lesse, it is a solid building made from limestone fieldstone ex-

tracted from the nearby quarry. The main building and the gate tower in the listed façade date from the end of the 11th century. The chateau was built by the Merode family but in 1668 it passed into the hands of the Hoffschmidt family, made famous by the hermit philosopher Edmond d'Hoffschmidt (1777-1861). The reclusive philanthropist left an indelible mark on the village of Resteigne and its history. You will find references to his charitable works on his tombstone in the cemetery of Resteigne and in the ruins of his hermitage that you will come to further along the trail.

After crossing the bridge over the Lesse, turn sharp right and cross the bridge over the Nanry stream. You are now on the "Lesse riverbank walk". After 100 metres, you will come to Resteigne Quarry.

The quarry is now disused, but continues to attract regular visits from geology students at universities across Belgium, in part for the striking demonstration of stratigraphy it offers. The limestone found here dates from the height of the Eifelian and Givetian stages, from the Devonian period. This means it was formed in the primary era, some 90 million years ago. At that time, Resteigne lay beneath the shallow Devonian seas. It therefore comes as no surprise to find various marine fossils (corals,



brachiopods, molluscs, crinoids and stromatopores) in the limestone of the quarry. The limestone extracted in Resteigne was highly reputed as "good building stone", "dressing stone", or for use as crushed stone. The quarry now provides a haven for a distinctive ecosystem, with a thriving population of extraordinary plant and animal life. Perhaps one of the most remarkable species found here is *Oedipoda careulescens* (the blue-winged grasshopper).

Now continue along the path that follows the right bank of the Lesse to the village of Belvaux (2,7 km).

This trail cuts across the entire stretch of Givetian limestones, which is broken here by folds and faults. Some 1,400 metres further on, you will see rising above you the vertical strata that form the Rocher à Pic. A little further still, 2.25 km from the start of the path, you will come to the Hermal





resurgence. This is a small spring at the base of a low rock wall, with a very unpredictable flow that may dry up entirely when water levels are low.

When you reach the village of Belvaux, stop and admire the magnificent little church on your right, as well as the traditional bread oven, and the rocky ridge of the Boine Massif ahead of you.

On the banks of the Lesse, to your left, you will find the Caracolis (snail) sculptures created by Stéphane Renard. Les Caracolis, the little snails, is the nickname still given, even now, to the inhabitants of Belvaux in reference to the activity of snail-farming that was one of the region's leading economic activities in the 19th century.

Pass by the bread oven and take the bridge on your left. At the first fork on Rue des Pairées, bear right towards "Ave et Auffe". At the fork, take the street on the left (Rue des Onais), signposted

"Ave et Auffe". Follow the narrow road for 1.5 km.

This part of the trail follows a shale depression (the Belvaux syncline) and on your left, to the south, the land rises to the limestone massif of Bois de Niau. The relief here is thus directly dictated by the nature of the subsoil. The shales found at Belvaux and throughout the Famenne are very soft and friable (subject to the action of frost, roots and groundwater) and lie in a depression.

After 1.5 km you will find on your left a dirt path across the fields. The entrance to this path is signposted "Ruines de l'Ermitage". At the far side of the field, turn right uphill to the Bois de Niau (keep following the signs for "Ruines de l'Ermitage").

The Bois de Niau limestone massif, also known to geologists as the Bois de Niau klippe, is a complex geological structure: a klippe is a portion



of an allochthonousnappe that has been separated from the rest of the nappe by erosion). Here at Bois de Niau, the uppermost part of the massif is made up of Givetian limestone that, thanks to a subhorizontal fault, rests on Frasnian, and hence younger, limestones and shales. The Bois de Niau is often (wrongly) considered to be part of the ancient primary forest that once covered the entire region. This primary forest was destroyed in the course of successive waves of clearing from Neolithic times down

to the 18th century, to create cultivable land but also and especially for the needs of the major iron and steel industries, and to provide wood for building or for heating. The present forest is made up of beech, oak and hornbeam, and is home to a wealth of daffodils and orchids.

**After climbing the Bois de Niau for 500 metres, you will find the site of the hermitage ruins on your left.**

The hermitage was occupied by a certain Edmond d'Hoffschmidt, known as the Hermit of Resteigne. Born in 1777, he served as an officer under Napoleon and over the course of his lifetime gave rise to many legends relating to the village of Resteigne. It was after taking part in the Pomeranian campaign that he returned to his ancestral home. The story goes that, during this campaign, he met and fell in love with Christiane von Keffenbrinck. Unfortun-



nately, her father opposed their marriage. This painful memory was said to be one of the reasons that led Edmond to become a recluse for almost 15 years. He immersed himself in literature, ranging from philosophy to the encyclopaedia. He was well versed in the classics, reading Latin but also the works of French authors such as Boileau, La Fontaine, Voltaire or Rousseau. He also appreciated the modern poets of the day such as Lamartine and Byron.

On the death of his father in 1830, he inherited the Chateau of Resteigne. This prompted him to emerge from his hermitage, although he never abandoned it entirely, to return to the village and manage his estate. In later years, he became a municipal council-

lor (January 1846) and finally Bourgmestre, or mayor, from August 1847 until his death. During his term of office, he was instrumental in significantly developing the village's activities. There are many accounts of both his kindness and his originality. Apparently, he delighted in playing tricks on his fellow citizens, spreading surprises and laughter.

Leaving the ruins behind, stay on the cliff path for 150 metres and then take the first right to start making your way downhill towards the village. Keep straight on along the path. After a 1 km descent, you will find yourself in terrain characteristic of the Calestienne: chalk grassland.





The limestone plateau on which you are standing was once covered by beechwoods very similar to those you encountered on your way uphill. Deforestation, whether for agricultural or industrial purposes, brought about a significant transformation in our sylvan landscape. Intensive deforestation accompanied by years of cultivation and the creation of pastures prevented the forests from reclaiming their former territory. These wide pasture lands were ideal for

grazing sheep and goats. The flocks were watched over by herders who would regularly burn off the tough, dried-up grass in winter to encourage new growth of tender young shoots for their flocks to graze on during the following summer. Chalk grassland is thus a semi-natural environment in which native plants have thrived but which could not be maintained without human intervention.





### Good to know :

Chalk grassland is very popular with botanists, who enjoy studying the wealth of flora and fauna it has to offer. Its limestone soil is fairly shallow, stony and reaches very high temperatures in summer. These are ideal conditions for calcicolous (chalk-loving) and thermophilic (heat-loving) plants, which are particularly well suited to these harsh conditions (small, fine leaves, sometimes hairy, waxy or succulent). The typical kind of plant you are likely to encounter here is the juniper.

After crossing the chalk grassland, carry on to the tarmac road.

When you reach the road, turn left downhill towards the village of Resteigne. When you arrive in the village, look up for a stunning view of the quarry.

Once back in the centre of the village, you will find yourself opposite the "Chez Dindin" brasserie; walk down the side of the building to the narrow path along the riverbank, to your right. (Do not cross the bridge: the path is on the near bank, on the right). At the end of the path, you will come to a small





wooden footbridge. Cross the footbridge and enjoy the view of your final geosite on this trail: the Resteigne mill (private property).

The mill dates from the 7th century and was listed as an historic monument in 1994. The entrance consists of a magnificent lintelled door bearing the date of 1792, and decorated with a wrought iron decoration in the style of Louis XIV. The waterwheel can still be seen on the eastern gable

end. The mill outbuildings were converted into housing during the 19th century.

After walking across the property, turn left uphill and take the road that runs alongside the ramparts of the chateau (700 metres). Cross the bridge over the Lesse and return to your vehicle in the Chemin des Chefiris car park.



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## Bureaux d'information touristique

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[www.saint-hubert-tourisme.be](http://www.saint-hubert-tourisme.be)

Open 7 days a week. 1 March to 31 October: 9am to 5.30pm. 1 November to end February: 9.30am to 4.30pm; 24 and 31 December 9.30 am to 3pm. Closed on 1 January and 25 December.

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