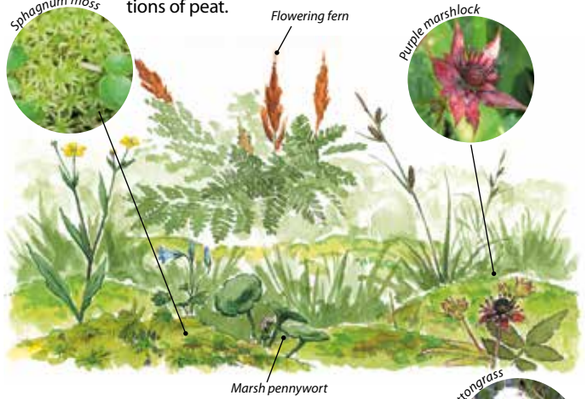
Stage 6 The marshland

This marshland or peat bogis fed by seepage of underground water. It is a wet zone, characterised by accumulations of peat.



Sphagnum moss forms a spongy ground cover.
These mosses can hold up to 30 times their dry weight in water. Other, quite rare plants thrive here, such as the purple marshlock or common cottongrass, which appeared after the restoration work.

Peat formation

Peat forms from the accumulation of partially decomposed organic matter in an area that is saturated with water, acidic and poorly oxygenated.

➔ *Carry on along the path and turn right towards the Gourbe river.*

Stage 7 The woodland bog

On your right. The woodland you can see here developed spontaneously after farming was abandoned at the site around 80 years ago. Willow, beech and alder graduallycolonised the area.

There has been no human intervention since then, which explains the amount of dead wood.

Dead wood is a habitat for numerous species of insects, molluscs, fungi and microbial life forms, who use it as a support, shelter or source of food. Once the wood decomposes, it forms humus.

Stage 8 The Gourbe

The Gourbe is a white-water river home to some specific fish species (sculpin, brown trout and common minnow).

Typical to trout habitat, the ***sculpin*** *spends its days nestled among stones. To blend into its environment, it darkens or lightens its scales. Thus matching the stone colour, the sculpin is very well camouflaged on the river bed. This phenomenon is known as homochromy.*

Sculpin

The signal crayfish *is the only imported species to have supplanted the native species (white-clawed crayfish) as it is more aggressive and a carrier of a disease which is mortal to the latter.*

➔ *Cross the bridge to reach the site entrance.*

Stage 9 Oak, beech and holly woodland

On the slopes where the soil is not too superficial, woodland has developed, dominated by oak and beech, along with other species such as holly and European rowan. This type of woodland is typical of humid climates and acidic soils, and only develops in the west of France and mountain areas.

European rowan bears small red fruit which birds love. In the past, bird-catchers would use nets to catch thrushes attracted by the red berries.

Site plan and discovery circuit

Conseil général de l'Orne

Contact : **OFFICE FOR NATURAL SENSITIVE AREAS**

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Tél. 02 33 81 61 53

Information on guided visits: Normandie-Maine natural park.

If you do not wish to keep this leaflet, please put it back in the dispenser at the site entrance.

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IMPRIM'VERT

Orne Natural Sensitive Areas

> Discovery circuit

Les Gorges de Villiers

english

L'ORNE Conseil Général

Avancer, c'est notre nature

Hello
and **welcome to Gorges de Villiers**

Our circuit has been divided into 9 stages to help you explore the diversity of the natural surroundings that make up the site, including the abundance of its fauna and flora and the history and legends linked with it.

Stage 1 Geology

Extending from the Andaines forest area, the Gorges de Villiers site is located on a strip of Armorican sandstone, overlooking the plains of the Orne and Mayenne regions. The gorges were formed following the appearance of a geological fault, which was then deepened by a stream.

At the entrance to the site, you will find an information boardexplaining the site's geological history.

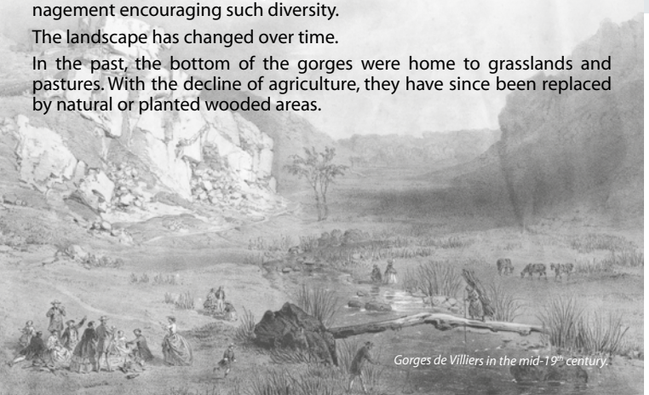
➔ *Follow the path in front of you that leads up to the look-out point.*

Stage 2 Landscape

The site is made up of a variety of environmental features such as woods, heathland, scree and marshland. Thiscan be explained by the varying conditions (humidity, soil depth, exposure, etc.) and environmental management encouraging such diversity.

The landscape has changed over time.

In the past, the bottom of the gorges were home to grasslands and pastures. With the decline of agriculture, they have since been replaced by natural or planted wooded areas.



Gorges de Villiers in the mid-19th century.

Stage 3 Caves and scree

The ground is covered in scree. Alternating ice ages and warmer periods in the Quaternary era (2 million to 100,000 years ago to the present) caused fragments of rock to break off. This phenomenon is known as frost-thaw action and here led to the formation of this rocky scree slope.

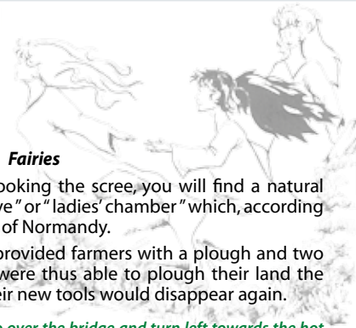
The viviparous lizard enjoys the heat stored in the rock.

Scree

Lichens (cladonia)

This environment offers extreme living conditions where moss and lichens thrive.

***Lichens** are able to develop on bare rock.*
Lichens are composite organisms combiningfungi and algae. The algae provide the nutrients produced by photosynthesis, while the fungi provide a support, moisture and mineral salts.



Fairies

On the edge of the path overlooking the scree, you will find a natural cavity in the rock. This is the "cave" or "ladies' chamber" which, according to legend, is home to Fée Gisèle of Normandy.

In exchange for gifts, this fairy provided farmers with a plough and two cattle for a day. These farmers were thus able to plough their land the next day. However, at sunset, their new tools would disappear again.

➔ *Go down towards the stream, go over the bridge and turn left towards the hot water spring.*

Stage 4 The hot water spring or "hot fountain"

Why do they call it hot water? Put your hand in the spring and you'll feel that the water temperature doesn't actually exceed 15°C. Drawn from the granitic depths, it remains at a constant temperature all year round so, in winter, it might actually feel warm!

It seems to spring from the rock, with strings of bubbles rising to the surface. These bubbles contain various gases, such as nitrogen, argon and helium.

This water is claimed to have healing properties, which is why the spa town of Bagnoles-de-l'Orne acquired it in 1930. There are even legends giving it magic properties, with it acting as a kind of fountain of youth.

Palmate newt

The palmate newt lives and reproduces here. Look down into the water and you might be able to spot one.

Historical remnants, such as flint axes and Roman coins, and traces left by washerwomen all show that this source has long been valued and exploited.

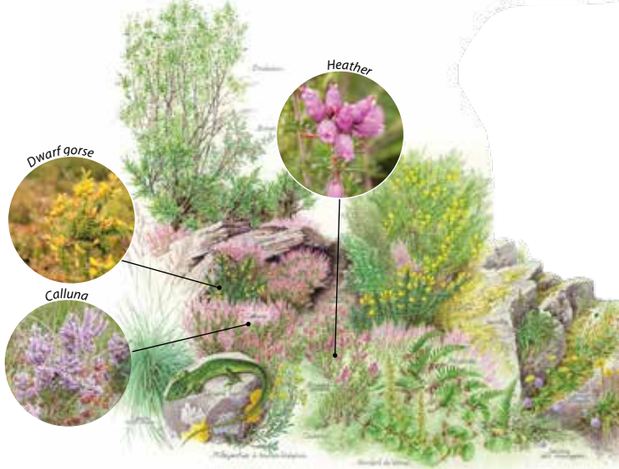
➔ *Go back the way you came and then head left towards the plateau.*

Stage 5 The dry heathland

The heathlands are the result of over-exploitation of the forests to supply wood to forges and glassworks over the centuries. These forests previously covered the top end of the site, which was later planted with conifers (in the 1960s).

Gorse and heather thrive on these poor, acidic soils.

Bell heather



How do you tell the difference between calluna and heather?

Calluna leaves look like small scales whereas heather leaves are more like small needles.

The heathlands are home to numerous insects. You can listen to and observe a large number of grasshoppers and crickets.

Beware of the tarantula!

Don't worry – this tiny spider barely measures a centimetre! It lives in the bottom of a silk pocket, buried in the ground with its entrance well-camouflaged. As soon as an insect ventures past, the spider feels the vibrations on its web and runs up to catch its prey.

▲ *Bog bush cricket*

◀ *Grasshopper*

Restoration of the heathland

Major work has been carried out over the last few years to re-establish this rich environment, threatened by new wood growth. Scots pine and beech have been removed. A section of the forest floor and soil has been scraped away to bring the seeds of plants typical to dry heathland to the surface and thus encourage recolonisation.

➔ *Follow the path towards the stream. At the bottom of the slope, turn left.*