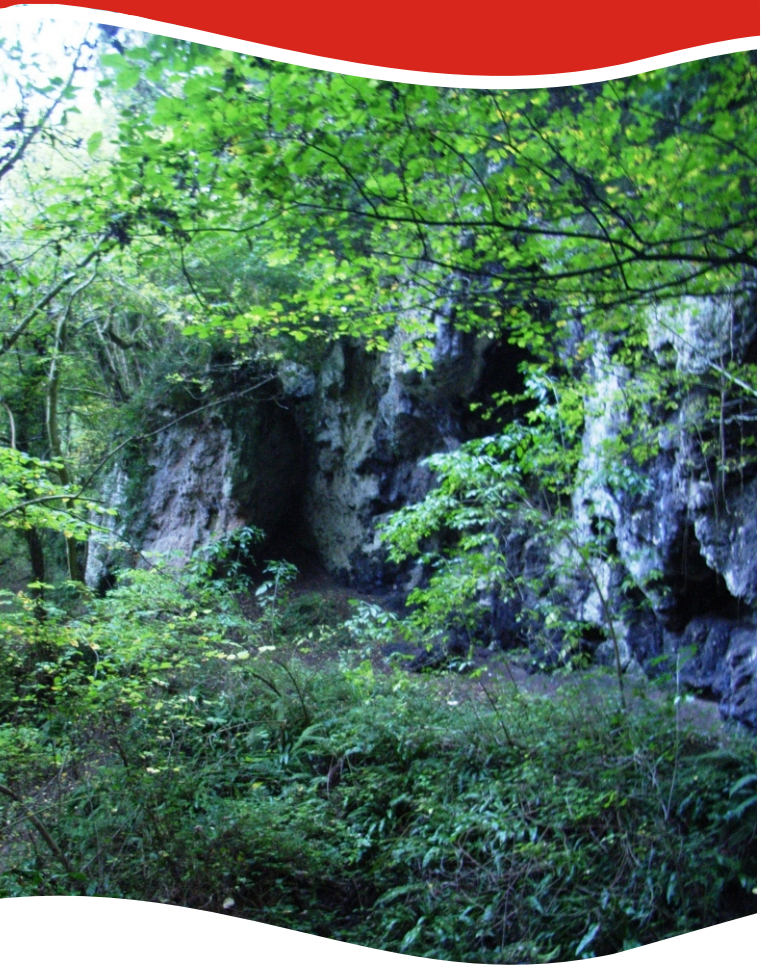
ABBERLEY AND MALVERN HILLS GEOPARK

GEOLOGY & LANDSCAPE TRAIL GUIDE

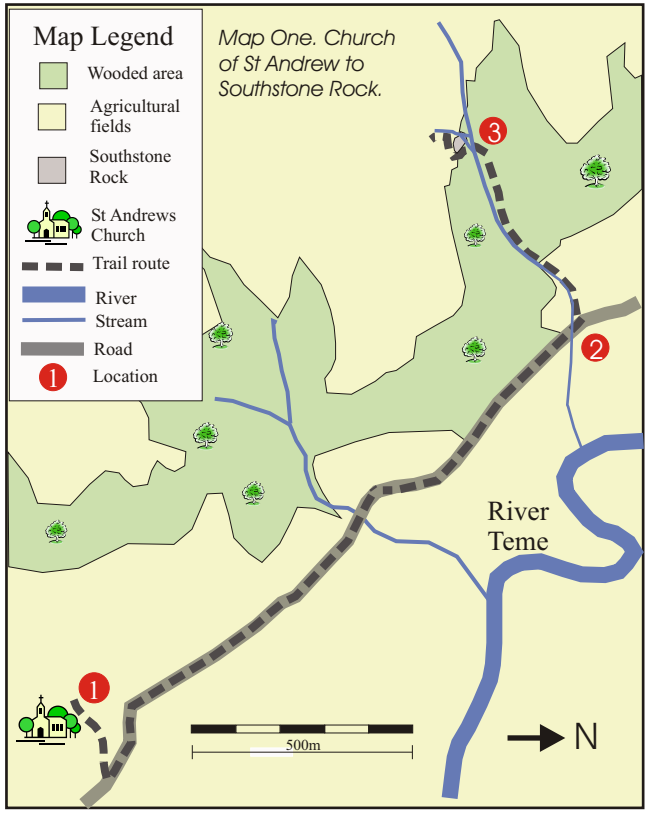
SOUTHSTONE ROCK



Abberley and Malvern Hills Geopark

SOUTHSTONE ROCK

This leaflet describes a guided geology and landscape trail for Southstone Rock (Grid Reference So708639). The trail starts at the Church of St Andrew, Shelsley Walsh (Grid Reference SO722629). Refer to Map One.



LOCATION ONE: St Andrew's Church

Walk to the main road and turn left. Follow the main road for 1.7km. As you walk along the road you will be treated to the beautiful and tranquil scenery of the Teme Valley. To your right the fields softly slope down towards the River Teme. Rising steeply in the east are the Abberley Hills. To the west, the valley sides are cut by a series of deep gorges carved out by the fast-flowing streams which plunge down the valley sides towards the River Teme.

LOCATION TWO:

Location Two is marked by a gate and Public Right of Way footpath on the left. Walk through the gate and follow the stream uphill. After 150m you will enter the woods.

The woods are quite magical and teeming with life. Tree trunks have been deformed into splendid shapes as they try to anchor themselves to the steep slopes of the dingle. The ground is rich in decaying leaf matter hosting a fine array of invertebrates. Several species of fungi can be found (Photogrpahs One and Two)

Continue uphill for another250m where you will reach a junction marked by a post on your left hand side (Location 3)

Photograph One:Blushing Bracket. (Daedaleopsis)

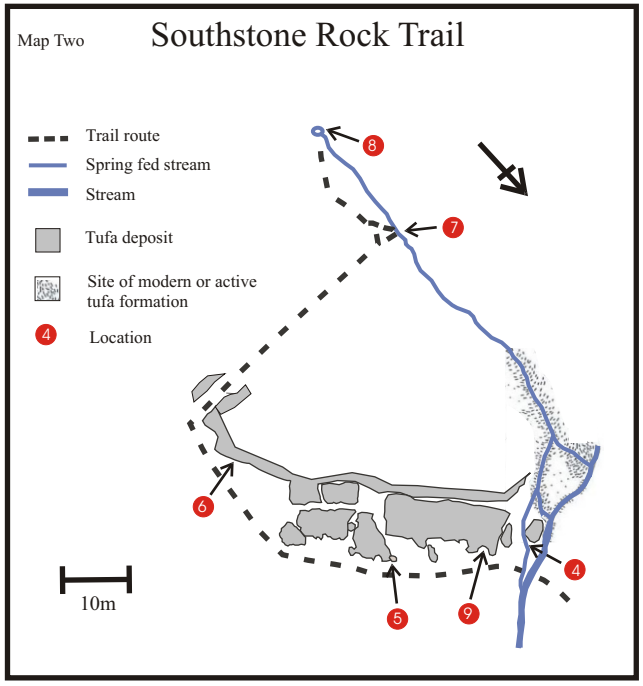
Photograph Two: Mycena Species

LOCATION THREE:

Turn left at the post and follow the small path until you cross over a small stream. **Southstone Rock** now stands before you in all its splendor. Southstone Rock is made of a soft grey rock called **Tufa**. Tufa is formed by the precipitation of water with a high dissolved calcium carbonate content (CaCO3). The calcium carbonate deposits accumulate on to moss growing on the rock face (Photograph Three). The moss continues to grow, pushing through the calcium carbonate. This new growth was coated again and so the process continued.

Photograph Three. Tufa forming on Palustrielle commutata covering the rock face. Species Palusustrielle commutata is commonly associated with tufa formation.

Some of the tufa has been radiocarbon dated so we know that the calcium carbonate has gradually accumulated over the last 6700 years to form the spectacular tufa cliffs forming Southstone Rock.



LOCATION FOUR: (please refer to Map Two)

The steam has been formed by a spring emerging from the base of the Bishop's From limestone. The source of this stream can be found at Location eight. Initially the stream would have flowed in an easterly direction. The stream gradually became blocked by the accumulating tufa deposits, forcing it to change direction of flow. Eventually the stream migrated across the cliff to its present location forming large deposits of tufa.

New tufa is still forming tday, if you look closely at the stream bed you will see that some of the stones are coated with a layed of calcium carbonate giving them an opaque lustre. This is geology in action!

LOCATION FIVE:

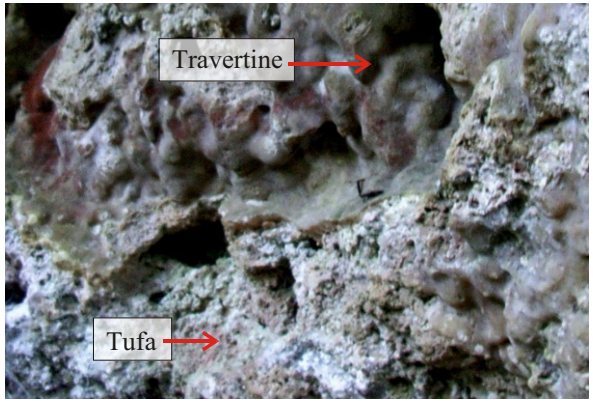
Follow the path to location five. You will notice that the cliff is split into several blocks. Originally it stood as one single entity but over time the ground has started to move under the weight of the rock, causing some of the blocks to break free.
The tufa is filled with many tiny cavities caused by the decay of moss around which it formed. The cavity shape left behind varies greatly creating many different textures within the rock (Photograph four).

It is not only mosses that become covered in calcium carbonate. Many snails have become encased in the tufa, preserving their shells forever.

Photograph Four: Textures preserved within the tufa

LOCATION SIX:

Follow the path to Location Six. If you look closely at the tufa, you will notice that the surface of the rock is covered with a smooth, hard coating. This coating is called Travertine. Chemically it is identical to tufa but instead of the calcium carbonate being deposited on to the mosses, it has been deposited directly on to the tufa (Photograph Five)



Photograph Five: Travertine Deposits

LOCATION SEVEN:

Follow the path until you reach Location Seven. If you look at the stream bed you will notice pieces of brick and slate. They once belonged to a cottage that used to stand on top of the rock until it was demolished in the 1950's.

People have been drawn to this site for thousands of years. It has been suggested that Southstone Rock lay on the important saltway from Droitwich to Leominster in Roman times. Several caves at its base were later used by travelling monks of Evesham for shelter and rest. The springs have been a focal point for human activity because they are thought to have both medicinal and spiritual properties. Southstone Rock was a retreat for hermits and pilgrims who travelled here to take the waters from a holy well.in Norman times a chapel dedicated to St John the Baptist stood on top of the rock. It is said that two monks from the Abbey of Evesham were located here as guardians of the chapel. Offerings were made to the chapel at the feast of St John the Baptist at a service ending with the drinking of water from the holy well.

LOCATION EIGHT:

Follow the path to Location Eight. The water escaping from this spring has travelled through the rocks forming the surrounding landscape. The Bromayrd plateau and the Teme valley are made up of Devonian sandstones (409 million years),Silurain limestones and mudstones (439millionyears). This rock sequence has resulted in the deployment of underground steams (Figure One)

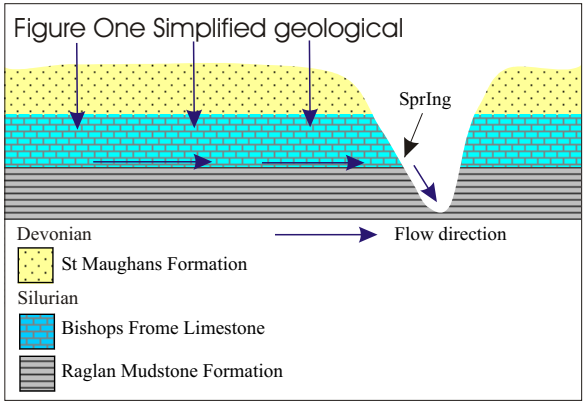


Figure One represents a simplified geological cross section of the area. Rainwater passes through the permeable sandstones of the St Maughans Formation. When the water reaches the layer of Bishops Frome Limestone it travels through it dissolving some of the calcium carbonate as it does so. The water is forced to move laterally along the base of the limestone when it reaches the impermeable mudstones of the Raglan Mudstone Formation. The water eventually emerges from springs at the base of the Bishops Frome Limestone. The water changes temperature when the spring emerges from the

ground. As the temperature is reduced, the water can then contain less dissolved calcium carbonate and the excess is deposited on the plants and rocks in the stream.

LOCATION NINE:

Retrace your steps back along the path to Location Nine. Look at the rock face and you will see a small cave which has been carved into the rock (Photograph Six).Afieldreport dated 1856 noted a series of rooms and passages carved into the rock. Another report in 1874 mentioned traces of steps built into the rock leading up to the site of the old chapel. All of this has been lost to erosion and rock collapse.

Photograph Six: Cave carved into the tufa

The trail ends here. Retrace your steps back to the Church of St Andrew (Location One).

CHURCH OF ST ANDREW:

The church of St Andrew is built almost entirely of tufa from Southstone Rock (Photograph Seven). The church is Norman in age and the interior is worth a visit for its beautifully decorated wooden carvings and stars painting on the ceiling.

Photograph Seven. Church of St Andrew, Shelsley Walsh

Blocks of tufa from Southstone Rock can be found in the walls of many churches within the Teme Valley (Photograph Eight). Tufa has been used as a building stones because it is easy to carve and is light in weight. However, it has also been suggested that by using tufa in sacred buildings the spiritual properties of the holy spring water were transferred directly into the place of worship. Tufa has also been used as a walling stone and as aggregate for the construction of local trackways and footpaths.

Photograph Eight. St Kenelms Church, Clifton Upon Teme.

DIRECTIONS:

The single road through Shelsley Walsh does not have a name. The road is met at the north end by the B4203 at Stanford Bridge. The southern end of this road is met by the B2404 which runs from Martley to Tenbury Wells.

The closest public transport is at Clifton upon Teme. Please contact Traveline on 0870 6082608 for details of bus times. Alternative Public Rights of Way can be followed to Southstone Rock. Please refer to O.S Explorer Map 204 for details.

For further information contact:

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