
Wookey Hole and Ebbor Gorge

Parking is available at both Wookey Hole and Ebbor Gorge.

Wookey Hole and Ebbor Gorge are two geological gems nestling under the southern flank of the Mendip Hills, three kilometres north-west of Wells. Wookey Hole, [96] [ST 53192 48021] now a show cave, has inspired visitors for centuries. The cave is the source of the River Axe and the legend of the 'Witch of Wookey'. Visitors enter the cave by a passage now abandoned by the river and descend to meet the underground Axe in the 'Witch's Kitchen' containing the stalagmite effigy of the 'Witch of Wookey'. Her actual bones are on display in the Wells and Mendip Museum. Beyond, the show cave enters a splendid series of rift chambers developed along prominent joints, to enter Cathedral Chamber (Chamber Nine). The subterranean Axe can be followed upstream by cave-divers through a series of sumps to the current limit of exploration at Wookey 25. Here the water rises up from a deep sump which has been pushed to a British depth record of 90 m (about 30 m below sea level!). Exploration continues.

The cave is unusual in that it is developed mostly in the Triassic Dolomitic Conglomerate, unlike most caves which are developed in the Carboniferous Limestone. The conglomerate is particularly well exposed in the exit tunnel.

The gorge downstream of the cave is unlike many other gorges on Mendip in that there are no feeder valleys. Instead the ravine is probably a product of cliff retreat and cavern collapse. Several small caves here have yielded important archaeological finds, which can be seen in Wookey Hole Caves Museum. Hyena Den has been used both by Palaeolithic man and as a hyena den. The caves also support an important roost of greater horseshoe bats.

The River Axe drains much of central Mendip, including most of the caves in the Priddy area. The connection was proven in 1860 when the owners of Wookey Hole Paper Mill successfully traced the water from St Cuthbert's Swallet (see Priddy Chapter) to Wookey Hole, using 'Vanadium Red' dye, after several unsuccessful attempts using chaff and even ink!

A short distance to the north-west is Ebbor Gorge, a National Nature Reserve with both geological and wildlife importance. The car park [ST 520 484] [97] [ST 52221 48371] offers a superb view across the Somerset Levels to Glastonbury Tor, a prominent 'outlier' of Jurassic rocks.

From the car park a footpath descends down into the valley. The prominent line of cliffs here marks the line of the Ebbor Thrust Fault. Here a slice of the Burrington Oolite has been thrust up over the younger Quartzitic Sandstone and the Coal Measures. The impermeable upper Carboniferous sandstone and shale crop out in the valley floor, [98] [ST 52340 48432] which explains why there is a small stream flowing here.

Ebbor Gorge itself [99] [ST 52591 48719] is incised into the Carboniferous Clifton Down Limestone. This spectacular ravine was formed by summer melt water run-off during cold phases in the Quaternary, when underground drainage was prevented by permafrost. The narrowest part of the gorge (known as 'The Narrows') forms a prominent 'knick point'; the remnants of a well-preserved former waterfall and plunge pool are evident here. This waterfall is a consequence of valley rejuvenation during the Quaternary cold periods. Each successive phase of valley incision is graded to a new lower base level as a consequence of regional lowering to the south.

This creates a series of knick points, which gradually migrate up the valley as erosion proceeds. The steep scree slopes are relics from frost shattering during the last cold period which ended 10 000 years ago.

Ebbor Gorge is a largely wooded nature reserve with way-marked footpaths. Ancient ash woodland, now regenerated after clear-felling during the First World War, dominates the steep rocky limestone slopes. The ground flora is very rich, with many ancient woodland species, and includes yellow archangel, dog's-mercury, wild anemone and bluebell. On the wetter sandstone at the bottom of the gorge, opposite-leaved golden saxifrage is abundant, with enchanter's-nightshade, moschatel and wood sedge.

Butterflies are abundant at Ebbor Gorge, and the site supports some rare species, including white-letter hairstreak and high brown fritillary. Many others are found on the rich limestone grassland.

Cliffs, scree and bluffs in the gorge itself are home to many ferns, lower plants, lichens and fungi, which are favoured by the sheltered, very humid microclimate. More than 150 lichen species have been recorded, in rich communities on the limestone outcrops and older trees, and the gorge also supports more than 100 species of moss and liverwort, including several rarities. Greater horseshoe bats use the gorge as a roosting site.

At the top of Ebbor Gorge is Higher Pitts Farm, the site of an old iron mine in the 1890s [100] [ST 53448 49137]. The iron ore was mined from the Dolomitic Conglomerate. The iron is associated with a unique assemblage of rare secondary lead, copper and manganese minerals. These minerals, mendipite, chloroxiphite and diaboileite, are rare or unknown outside the Mendip area. Little is left to see on the surface, most of the pits having being filled in and the former spoil tips leveled.

The area between Wookey Hole and Wells has some fascinating geology. Here, the Triassic and Jurassic rocks lap onto the southern flank of the Mendip Hills, forming a distinctive bench around Milton. The best place to see these rocks is Milton Lane, just off the Old Bristol Road at [ST 548 472] [101] [ST 54794 47222]. This track provides the best section through the top Triassic and basal Jurassic rocks in the area, from the terrestrial red Triassic Mercia Mudstone and Dolomitic Conglomerate, up into the interbedded creamy limestone and mudstone of the Penarth Group and the basal Jurassic. At the lower end of the cutting, a small fault juxtaposes the red marl with the limestone beds. Fossils including bivalves, crinoids and the ammonite *Caloceras* can be found in the limestone bands. This transition can also be identified in a couple of other tracks around Milton and Walcombe.

Further up the track is a small stream sink [102] [ST 55038 47763]. Here, a stream draining off the Lower Jurassic Charmouth Mudstone sinks into the underlying limestone. However, the water must flow into and through the Carboniferous Limestone at depth to reach the resurgence at St Andrew's Risings in Wells.

To the south, Milton Hill is bisected by the aptly named Split Rock Quarry. [103] [ST 53905 47094]. Popular with abseilers, the western side of this quarry is cut along a major joint-face, stained red with the iron mineral haematite. The larger quarry nearby is no longer active, but quarrying in 1935 intercepted a vertical fissure which was destroyed by 1938. This fissure contained remains of hippopotamus and straight-tusked elephant dating back to the Ipswichian interglacial 120 000 years ago. The remains are in the Wells and Mendip Museum.

Figures

(Figure 96) The River Axe emerges from its journey underground at the mouth of Wookey Hole.

(Figure 97) Aerial photograph Wookey Hole and Ebbor Gorge.

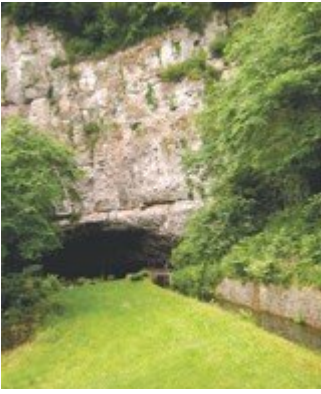
(Figure 98) Wookey Chamber Nine. This large chamber is the furthest point in the show cave. The lake is the underground River Axe.

(Figure 99) Cross-section showing the course of the water from Swildon's Hole, Priddy through to the resurgence at Wookey Hole, with former water tables shown.

(Figure 100) Ebbor Gorge. This rocky ravine is a National Nature Reserve owned by the National Trust. The reserve supports a wide variety of flora and fauna.

(Figure 101) Toothwort forming a tall flowering spike rising above the woodland floor. © Sharon Pilkington.

(Figure 102) The Milton Lane section. The track here exposes a section of the basal Jurassic strata, here consisting of interbedded limestone and mudstone.



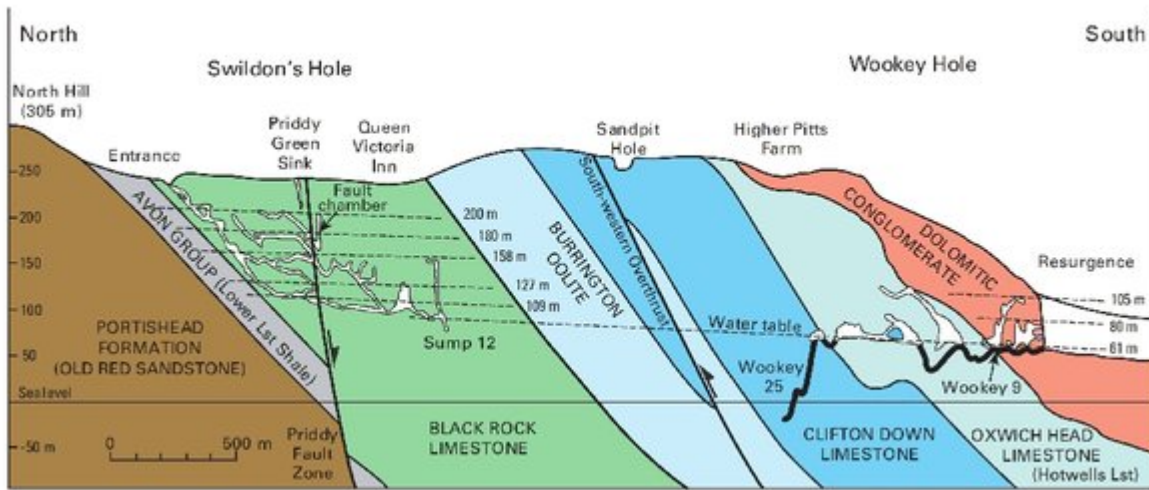
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